

# Electric Utility Interconnection Public Meeting U-15113

January 9, 2007

Michigan Public Service Commission

# *Order Initiating Investigation*

- On October 24, 2006, the Commission issued an Order in Case No. U-15113 to:
  - 1) investigate the interconnection of independent power producers with a utility's system,
  - 2) identify any problems or deficiencies in the existing interconnection procedures,
  - 3) develop and implement remedies,
  - 4) set today's date for a public meeting, and
  - 5) directed the Staff to file a report by January 31, 2007.

# *Agenda*

- MPSC Staff Introductions
- Overview of Filings
- Under 30 kW Generator Interconnection Issues
  - Summary of Commenter's Interconnection Issues
  - Opportunity for Additional Comments
  - Summary of Commenter Recommendations
  - Opportunity for Additional Recommendations
  - Consensus Discussion
- 10 Minute Break
- 30 kW and Larger Generator Interconnection Issues
  - Summary of Commenter's Interconnection Issues
  - Opportunity for Additional Comments
  - Summary of Commenter Recommendations
  - Opportunity for Additional Recommendations
  - Consensus Discussion

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# New web pages on Customer Generation

(<http://www.michigan.gov/mpsc>,

Choose Electricity and then Customer Generation from the left side menu list)

## What is Customer Generation?

Typical customer electric generation technologies include solar photovoltaic systems, wind turbines, and on-farm anaerobic digestion systems. These systems are located on the customer's premises.

> More

## **Spotlight**

- MPSC Starts Investigation into Interconnection of Independent Power Projects with Electric Utilities

## **Utility Interconnection Information**

- MPSC Interconnection Standards
- Net Metering
- Utility Interconnection Contacts
- Generic MPSC-Approved Generator Interconnection Requirements

## **Find Your Utility**

- Utility Addresses & Contacts
- Service by City/Town
- Service by Township/County
- Service Area Map



# *Filings Received*

- November 14, 2006
  - DTE Laker School Interconnection Process Report
- November 28, 2006
  - All regulated utilities filed interconnection reports
- December 19, 2006
  - 20 separate comment filings
    - Customer/Developer/Other (19 filings)
    - Regulated Utilities (1 combined filing)

# *Summary of Interconnections Reported by Utilities*

Aggregate Generator Output	Number of Projects
Up to 10 kW	17
Greater than 10 kW but less than 30 kW	2
30 kW or more but less than 150 kW	0
150 kW or more but less than 750 kW	3
750 kW or more but less than 2 MW	8
2 MW or more	12
<b>Total Projects</b>	<b>42</b>
(Above data does not include 5 very small <100 kW DTE projects.)	
Note: Does not include canceled projects.	

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# *Commenter's Key Issues*

## *<30 kW*

- Application is too complex
- Longer than 2 week application processing time
- Misplaced interconnection applications
- Interdepartmental coordination within the utility on interconnection activity issues
- UL certification's not sufficient
- Need for a list of certified equipment as required in MPSC Interconnection Standards (Rule 8)
- Customers are beginning parallel operation without the utility's knowledge
- Utility concern for system reliability and safety



# *Commenter's Key Issues*

## *<30 kW*

- Net Metering
  - Complex billing and metering
  - Meter(s) are too expensive
  - Metering costs vary by utility
  - Customer costs/economics information is not readily available
  - Net metering credit is too low
  - Net metering generation must be sized not to exceed the customer's self-service needs

# *Additional <30 kW Issues?*

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## *Commenter's Recommendations <30 kW*

- Develop a simplified <30 kW application
- Add new category for 10 kW and under – use IREC model or FERC Small Generation Interconnection Procedures
- Education and outreach for developers & utility
- Penalties for both developers and utilities

# *Commenter's Recommendations*

## *<30 kW*

- Outsource net metering related billing, metering, and interconnection tasks to a single entity
- Use a single bi-directional meter for net metering
- Utilities to provide meter cost and equipment information, along with sample billing information
- Increase net metering to all inverter based systems up to up to 1MW
- Allow customer credit for all electricity supplied to the grid – no annual reset back to zero
- Allow typical residential meter to spin backwards
- Annual meter reading
- Prohibit transmission charges

# *Commenter's Recommendations*

## *<30 kW*

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# *Consensus Discussion*

## *<30 kW*

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# *Commenter's Key Issues*

## *30 kW and Larger Generators*

- Utility Comments
  - Timelines are unrealistic
    - Often asked to evaluate multiple alternatives
    - Timeline is not long enough to include engineering study, design, equipment procurement and construction
    - Some equipment has a long procurement lead time
    - Additional cost to keep interconnection equipment stocked
    - Utility may find that customer's equipment is not installed as indicated on the one-line or site diagram
  - Utilities are spending more than 2 hours in consultation with customer
  - Commission waiver procedure not flexible enough
  - Public needs more information on interconnection procedures and power quality issues

# *Commenter's Key Issues 30 kW and Larger Generators*

- Time Issues
  - Interconnection studies take too long
  - Interconnection timelines not met
    - Application processing deadlines range from 4 weeks to 18 weeks for 30 kW and larger generators
  - Utility internal coordination for interconnection responsibilities needs streamlining

# *Commenter's Key Issues 30 kW and Larger Generators*

- High Interconnection Costs
  - Metering requirements & costs
  - Interconnection study costs
  - Reasonableness/necessity of interconnection equipment required by utility
  - Fairness of construction & upgrade costs



# *Commenter's Key Issues 30 kW and Larger Generators*

- Standby rates for non-net metering renewable energy generators
- Regulatory issues with wheeling to retail customers w/o becoming as AES
- Microgrids
- One utility required an executed interconnection agreement prior to power purchase contract negotiation
- FERC Hydro Licensing is too complex



# *Discussion of Additional Issues*

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# *Commenter's Recommendations*

## *30 kW and Larger Generators*

- Set achievable timelines that allow for flexibility at each step in the process
- Lengthen interconnection timelines
- Keep interconnection timelines the same
- Require utilities to have a pre-interconnection application collaborative meeting with utility interconnection team for  $\geq 30$  kW generators
- Point of contact at each utility with knowledge of interconnection procedures
- Penalties for utilities
- Education and outreach for developers & utility
- Utilities should keep acceptable interconnection equipment on-hand
- Outsourcing of utility interconnection activities
- Develop standardized easement forms

# *Commenter's Recommendations 30 kW and Larger Generators*

- Develop informal staff review process to be used when issues arise
- Allow MPSC staff to review and consent to certain waivers informally
- Utilities should define areas of opportunity where distributed generation would be helpful to their system
- Electric power purchase contracts should be standardized so project economics can be known up-front
- Wheeling tariffs and regulatory options allowing microgrids should be developed
- Interconnection equipment should be portable and move with the customer if the plant moves
- Allow net metering up to 1 MW with aggregation of meters

# *Additional Recommendations? 30 kW and Larger Generators*

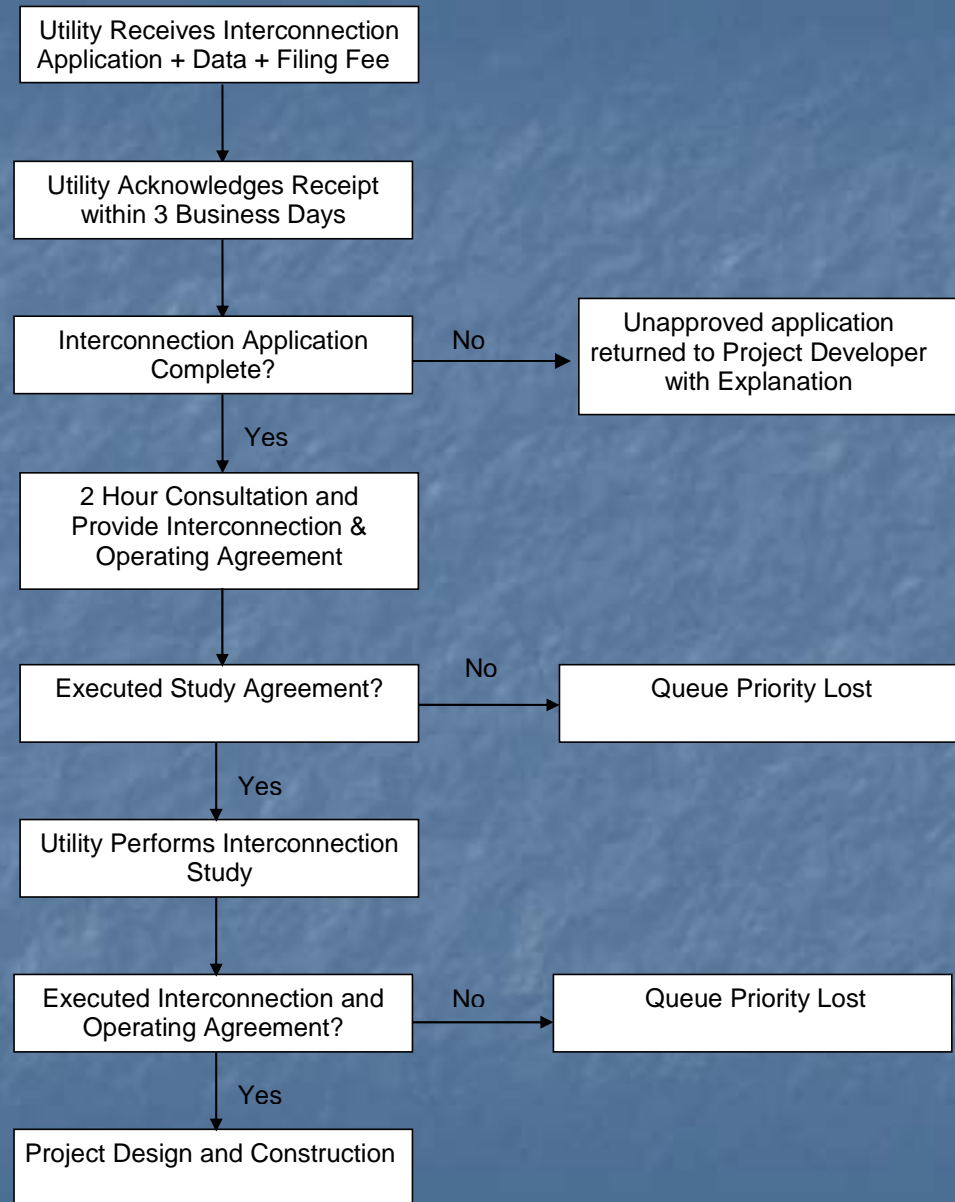
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# *Consensus Discussion*

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## The Interconnection Process



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